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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/590,438

08/23/2006

Tsuneo Nakata

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OSTROLENK FABER GERB & SOFFEN  
1180 AVENUE OF THE AMERICAS  
NEW YORK, NY 100368403

EXAMINER

NGUYEN, DUC M

ART UNIT

PAPER NUMBER

2618

MAIL DATE

DELIVERY MODE

11/12/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/590,438	<b>Applicant(s)</b> NAKATA ET AL.	
	<b>Examiner</b> DUC M. NGUYEN	<b>Art Unit</b> 2618	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 October 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 23-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

This action is in response to applicant's response filed on 10/1/09. Claims 23-40 are now pending in the present application.

#### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "a hand-over process based upon difference of said transmission/reception state of each of said antennas" as recited in claims 23, 28, 33 must be shown ((i.e, details of a hand-off procedure) or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

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the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such **full, clear, concise, and exact terms** as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims **23-37** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As to claims 23, 28, 33, the claims recite a limitation of “detecting a transmission/reception condition of each antenna, and performing a hand-over process based upon **difference** of said transmission/reception condition of each of said antennas”.

However, this limitation contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Here, although a hand-over process is well known in the art for generally handing-off the communication to a base station providing a strongest signal quality, there are several

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implementations, however, for hand-off methods that would aim to prevent ping-pong hand-offs from one base station to another.

For a communication device that comprises a plurality of antennas, the situation would become more complicate. For examples,

Fig. 4 shows two antennas (101-1, 101-2) and three base stations (102-1, 102-2, 102-3), then “means for detecting a transmission/reception state of each antenna” would comprise

X11 : signal measurement between antenna 101-1 and base station 102-1,

X12 : signal measurement between antenna 101-1 and base station 102-2,

X13 : signal measurement between antenna 101-1 and base station 102-3,

X21 : signal measurement between antenna 101-2 and base station 102-1,

X22 : signal measurement between antenna 101-2 and base station 102-2,

X23 : signal measurement between antenna 101-2 and base station 102-3,

and “performing a hand-over process based upon difference of said transmission/reception state of each of said antennas” would comprise several differences ( $X_{ik} - X_{jl}$ ), where  $i=1, 2$ ;  $j=1, 2$ ;  $k=1,2, 3$ ; and  $l=1,2,3$ ; this would lead to the question of which **difference** would be used for performing a hand-over process based upon **difference** of said transmission/reception state of each of said antennas ? and subsequently, how would the hand-off process be done specifically ? Accordingly, an amended specification and a new drawing showing a flow chart that would outline/detail

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all of the above procedures (i.e, step by step) would be required in order to overcome the 112 rejection.

However, in order to speed-up the prosecution of the application, the hand-off process based upon **difference** of said transmission/reception condition of each of said antennas" would be simply interpreted as a process for handing-off the communication to a base station that provides a strongest signal reception quality. For instant, in the above example, the base station providing the largest  $X_{ij}$  signal would be the handed-off base station.

### ***Claim Rejections - 35 USC 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims **23-40** are rejected under 35 U.S.C. 103(a) as being unpatentable by **Henon (WO 01/47126)**.

Regarding claims **38-40**, **Henon** teaches a hand-over method of mobile telecommunications, characterized in including the steps of:

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detecting a difference of transmission/reception state of two or more antennas mounted separately on a mobile body at an extent that a base station of which radio wave intensity becomes maximum differs antenna by antenna in a case where the mobile body has stood still in the vicinity of a boundary of wireless areas (see Figs. 2A-2C and col. 5, lines 12-21 regarding “sufficiently spaced apart in distance”), noting for “using only the one signal having the **better** signal quality” (col. 5, lines 26-28, col. 6, line 13) which would implicitly suggest detecting a difference of transmission/reception state; and

performing a hand-over process to the base station of the antenna where the radio wave intensity becomes strong with movement (see Figs. 2A-2C and col. 5, line 29 – col. 6, line 19), noting for “using only the one signal having the **better** signal quality” and “Once the communication between transceiver 15 and new local base station 32 is **stabilized**”, which would implicitly teach “radio wave intensity becomes strong with movement” and that the new base station 32 would provide a stronger signal than the old base station 22.

Therefore, the claimed limitations are made obvious by **Henon**.

Regarding claim **23**, the claim is rejected for the same reason as set forth in claims 38-40 above, where **Henon** would teach simultaneous and independent communications as claimed (see Figs. 2A-2C and col. 5, lines 14-16).

Regarding claims **24-26**, the claims are rejected for the same reason as set forth in claim 23 above. However, **Henon** fails to teach a vehicle, a train or a ship. However, it has been held that a recitation with respect to the manner in which a claimed

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apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations *Ex parte Masham 2* USPQ2d 1647 1987).

Regarding claim **27**, the claim is rejected for the same reason as set forth in claims 23-24 above. In addition, **Henon** would teach in a case where a set of base stations with which communication is possible via the antenna differ antenna by antenna, making communication with respective separate base stations as claimed (see Fig. 2B).

Regarding claims **28-37**, the claims are interpreted and rejected for the same reason as set forth in claims 23-27 above.

### ***Response to Arguments***

5. Applicant's arguments with respect to claims 23-40 have been considered but are moot in view of the new ground(s) of rejection.

As to the objection to the drawing and 112 first rejection, they are maintained unless Applicant agrees with the above Examiner's interpretation regarding the hand-off process.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See the attached PTO-892.

7. Any response to this action should be mailed to:



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Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

(571) 273-8300 (for **formal** communications intended for entry)

(571)-273-7893 (for informal or **draft** communications).

Hand-delivered responses should be brought to Customer Service Window,  
Randolph Building, 401 Dulany Street, Alexandria, VA 22314.

Any inquiry concerning this communication or communications from the examiner should be directed to Duc M. Nguyen whose telephone number is (571) 272-7893, Monday-Thursday (9:00 AM - 5:00 PM).

Or to Nay Maung (Supervisor) whose telephone number is (571) 272-7882.

/Duc M. Nguyen/

Primary Examiner, Art Unit 2618

Nov 7, 2009